

# Manufacturers' Shipments, Inventories, and Orders

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U.S. Department of Commerce  
BUREAU OF THE CENSUS

All figures in text below are in seasonally adjusted current dollars.

New orders for manufactured products in October rose 3.4 percent or \$3.9 billion from September primarily as a result of a \$2.7 billion increase in new orders for defense capital goods, the Department of Commerce, Bureau of the Census reported today. The increase in the defense capital goods series, which resulted from a substantial increase in aircraft, aircraft parts and shipbuilding, is the largest ever recorded in the series. New orders for manufacturing industries other than defense capital goods rose \$1.2 billion or 1.1 percent. The increase in new orders for all manufacturing industries is the largest since the 4.9 percent increase in March 1977.

The sharp rise in defense capital goods orders resulted from the substantial number of Department of Defense contracts awarded during the last few days of fiscal 1977 which ended on September 30. Since there are delays between DOD announcements of contract awards and the recording of contracts on manufacturers' books, most of these end of September orders were reflected in manufacturers' October reports. The October increase in defense capital goods new orders exceeds the previous record increase set in August 1974 when new orders increased \$2.4 billion.

Among the industries other than defense, producers of non-defense capital goods reported a \$0.2 billion or 1.1 percent increase in new orders to \$16.4 billion and a \$0.4 billion or 2.5 percent increase in shipments. The primary metals industries recorded declines in both new orders and shipments, largely due to decreases in the steel industry where new orders fell 8.3 percent. The machinery industries recorded shipments of \$17.5 billion representing an increase of \$0.3 billion or 1.5 percent and new orders of \$18.2 billion, 1.6 percent or \$0.3 billion above the September figure. New orders for transportation equipment were greatly affected by the defense capital goods increase and rose 22 percent or \$2.9 billion to \$16.1 billion.

Among nondurable industries, chemical producers reported a \$0.3 billion or 2.8 percent decline in shipments, primarily in industrial chemicals and in drugs, soaps and toiletries. Petroleum producers showed a \$0.3 billion or 3.3 percent increase in shipments and food producers recorded a \$0.4 billion or 2.4 percent increase in October after showing a \$0.4 billion or 2.4 percent decline in September.

Inventories held by all manufacturers in October were \$176.9 billion, \$0.7 billion or 0.4 percent above the September figure of \$176.2 billion. While stocks of most industries showed moderate increases, the stocks of the aircraft and parts industries showed a \$0.4 billion or 4 percent decline to \$10.0 billion. Increases were recorded in the nonelectrical machinery industries (\$0.3 billion or 1 percent) and in the primary metals industries (\$0.2 billion or 1.1 percent). Stocks held by nondurable goods producers rose \$0.4 billion or 0.6 percent and showed the largest rise in chemical industries where end of October inventories were \$14.2 billion, \$0.3 billion or 2 percent above September.

## SCHEDULED RELEASE DATES

The figures on the durable goods industries in this report supersede those issued earlier in the advance report on durable goods. The present report is based on more complete reporting, but the estimates are also considered preliminary. Final figures will appear as historical data in the report to be published for next month. The advance report on durable goods for November is scheduled for release on December 21, 1977 and the full report is scheduled for release on January 3, 1978.

Address inquiries concerning these figures to U.S. Department of Commerce, Bureau of the Census, Industry Division, Washington, D.C. 20233, or call William Menth, (301) 763-2502.

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Table 1.--VALUE OF MANUFACTURERS' SHIPMENTS, INVENTORIES, AND ORDERS, BY INDUSTRY GROUP

(Millions of dollars)

Industry group	Shipments						Total inventories					
	Seasonally adjusted			Without seasonal adjustment			Seasonally adjusted			Without seasonal adjustment		
	Oct. 1977 <sup>p</sup>	Sept. 1977 <sup>r</sup>	Aug. 1977	Oct. 1977 <sup>p</sup>	Sept. 1977 <sup>r</sup>	Aug. 1977	Oct. 1977 <sup>p</sup>	Sept. 1977 <sup>r</sup>	Aug. 1977	Oct. 1977 <sup>p</sup>	Sept. 1977 <sup>r</sup>	Aug. 1977
All manufacturing industries:												
Total.....	112,745	111,921	111,376	117,861	116,853	109,894	176,829	176,164	175,104	175,395	174,161	173,730
Total, excluding transportation.....	98,946	98,318	98,183	102,329	102,672	98,616	156,682	155,627	154,549	155,001	153,489	153,335
Total for industries with unfilled orders...	58,519	58,159	57,680	61,045	60,932	56,787	117,505	117,220	117,019	116,317	116,224	116,402
Durable goods industries, total.	59,065	58,608	58,087	62,491	61,415	55,768	112,075	111,787	111,452	110,889	110,740	110,656
Durable goods with unfilled orders.....	46,567	46,254	45,693	48,403	48,458	44,632	102,886	102,723	102,461	101,982	101,856	101,719
Stone, clay, and glass products.	2,851	2,955	3,080	3,129	3,189	3,281	4,399	4,348	4,314	4,222	4,241	4,286
Primary metals, total.....	8,220	8,440	8,281	8,326	8,544	7,991	17,830	17,640	17,759	17,449	17,357	17,486
Blast furnaces, steel mills.	4,245	4,372	4,273	4,198	4,350	4,154	10,394	10,323	10,519	10,197	10,178	10,288
Nonferrous and other primary metals.....	3,020	3,119	3,073	3,108	3,216	2,932	6,346	6,242	6,213	6,219	6,155	6,195
Fabricated metal products total.....	7,615	7,432	7,303	8,086	7,866	7,438	13,888	13,897	13,763	13,600	13,788	13,828
Metal cans, barrels, and drums.....	715	686	656	710	773	784	1,223	1,272	1,286	1,110	1,202	1,282
Machinery, except electrical, total.....	10,514	10,333	10,465	10,434	10,622	9,716	25,532	25,242	25,148	25,152	24,820	24,795
Engines and turbines.....	1,011	912	930	913	981	814	2,097	2,106	2,092	2,119	2,079	2,075
Farm machinery and equipment.	858	806	904	952	835	798	2,515	2,454	2,452	2,339	2,351	2,386
Construction, mining, and material handling equipment.	1,981	1,946	1,866	1,953	1,954	1,827	5,640	5,508	5,429	5,487	5,370	5,326
Metalworking machinery.....	613	622	612	599	642	539	1,619	1,617	1,617	1,627	1,614	1,619
General industrial machinery	895	948	991	933	971	939	2,759	2,708	2,662	2,698	2,648	2,641
Electrical machinery, total...	7,024	6,946	6,912	7,424	7,401	6,780	15,473	15,488	15,379	15,371	15,298	15,315
Electrical transmission and distribution equipment and industrial apparatus.....	1,406	1,317	1,370	1,416	1,394	1,315	3,060	3,065	3,038	3,057	3,047	3,018
Household appliances.....	984	953	924	1,016	1,027	968	1,683	1,687	1,701	1,627	1,609	1,652
Radio and TV.....	523	489	483	634	584	504	878	856	869	886	874	921
Communication equipment.....	1,824	1,906	1,817	1,864	1,897	1,727	4,980	4,949	4,844	4,975	4,870	4,781
Transportation equipment, total <sup>2</sup>	13,799	13,603	13,193	15,532	14,181	11,278	20,147	20,537	20,555	20,394	20,672	20,395
Motor vehicles and parts....	9,371	9,367	9,195	10,972	9,805	7,455	7,080	7,066	7,112	7,285	7,292	7,098
Aircraft, missiles, and parts.....	2,888	2,771	2,680	2,919	2,853	2,487	9,997	10,399	10,445	10,054	10,358	10,371
Shipbuilding and military tank vehicles.....	649	571	565	695	580	548	1,398	1,425	1,410	1,414	1,402	1,364
Instruments and related products, total.....	2,377	2,319	2,339	2,501	2,497	2,313	4,998	4,933	4,878	4,957	4,914	4,906
Scientific and engineering..	1,450	1,391	1,364	1,485	1,472	1,329	3,179	3,161	3,088	3,147	3,120	3,078
Photographic goods.....	759	755	788	816	826	797	1,345	1,317	1,346	1,339	1,335	1,370
All other durable goods industries.....	6,665	6,580	6,514	7,059	7,115	6,971	9,808	9,702	9,656	9,744	9,650	9,645
Nondurable goods industries, total.....	53,680	53,313	53,289	55,370	55,438	54,126	64,754	64,377	63,652	64,506	63,421	63,074
Nondurable goods with unfilled orders.....	11,952	11,905	11,987	12,642	12,474	12,155	14,619	14,497	14,558	14,335	14,368	14,683
Food and kindred products, total.....	15,746	15,383	15,768	16,256	16,110	15,774	16,463	16,390	16,120	16,870	16,124	15,751
Meat products.....	3,989	3,930	3,958	4,121	3,977	4,029	1,314	1,361	1,348	1,289	1,297	1,280
Fats and oils.....	1,560	1,495	1,494	1,549	1,532	1,510	1,703	1,426	1,539	1,567	1,106	1,294
Tobacco products.....	697	731	708	701	726	749	3,646	3,712	3,561	3,602	3,501	3,309
Textile mill products.....	3,643	3,589	3,537	3,908	3,833	3,640	5,449	5,413	5,461	5,285	5,336	5,473
Paper and allied products, total.....	4,482	4,441	4,548	4,605	4,587	4,675	5,660	5,628	5,649	5,591	5,550	5,648
Pulp, paper, etc.....	1,931	1,948	1,964	2,005	1,948	2,018	2,170	2,167	2,173	2,134	2,124	2,159
Paperboard containers.....	1,024	1,014	1,045	1,077	1,057	1,082	1,467	1,451	1,467	1,458	1,449	1,486
All other paper containers..	1,527	1,479	1,539	1,523	1,582	1,575	2,023	2,010	2,009	1,999	1,977	2,003
Chemicals and allied products, total.....	9,306	9,578	9,206	9,244	9,851	9,319	14,226	13,949	13,746	13,941	13,620	13,543
Industrial chemicals, except pigments.....	3,178	3,295	3,058	3,051	3,256	3,159	4,082	3,995	4,053	4,033	3,915	3,976
Drugs, soap, and toiletries.	2,188	2,400	2,172	2,348	2,712	2,279	4,238	4,180	4,064	4,136	4,125	4,081
Petroleum and coal products...	8,336	8,067	8,073	8,274	8,117	8,122	5,830	5,846	5,686	5,969	5,941	5,780
Rubber and plastics products, n.e.c.....	3,084	3,155	3,070	3,245	3,256	3,109	4,095	4,185	4,137	4,169	4,087	4,092
All other nondurable goods industries.....	8,386	8,369	8,379	9,137	8,958	8,738	9,385	9,254	9,292	9,079	9,262	9,478

See footnotes at end of table.

Table 1.--VALUE OF MANUFACTURERS' SHIPMENTS, INVENTORIES, AND ORDERS, BY INDUSTRY GROUP--Continued

(Millions of dollars)

Industry group	New orders						Unfilled orders					
	Seasonally adjusted			Without seasonal adjustment			Seasonally adjusted			Without seasonal adjustment		
	Oct. 1977P	Sept. 1977 <sup>r</sup>	Aug. 1977	Oct. 1977P	Sept. 1977 <sup>r</sup>	Aug. 1977	Oct. 1977P	Sept. 1977 <sup>r</sup>	Aug. 1977	Oct. 1977P	Sept. 1977 <sup>r</sup>	Aug. 1977
All manufacturing industries:												
Total.....	116,303	112,441	111,494	121,412	117,055	111,036	186,722	183,166	182,646	187,528	183,974	183,774
Total, excluding transportation.....	100,216	99,296	99,077	102,890	102,865	99,956	130,322	129,052	128,071	130,094	129,531	129,339
Total for industries with unfilled orders...	62,077	58,679	57,798	64,596	61,134	57,929	-	-	-	-	-	-
Durable goods industries, total.	62,520	59,048	58,270	66,044	61,713	57,107	178,138	174,682	174,245	179,172	175,617	175,322
Durable goods with unfilled orders.....	50,022	46,694	45,876	51,956	48,756	45,971	-	-	-	-	-	-
Primary metals, total.....	8,062	8,692	8,576	8,194	8,194	8,423	17,728	17,887	17,634	17,173	17,306	17,657
Blast furnaces, steel mills.	4,137	4,513	4,382	4,161	4,102	4,409	11,381	11,489	11,347	11,107	11,144	11,393
Nonferrous and other primary metal products.....	2,986	3,208	3,234	3,019	3,094	3,082	5,094	5,129	5,040	4,814	4,903	5,025
Fabricated metal products.....	7,921	7,204	7,346	8,042	8,016	7,461	23,301	22,995	23,222	23,554	23,599	23,448
Machinery, except electrical, total.....	11,000	10,823	10,897	10,899	10,765	10,287	46,397	45,909	45,420	46,309	45,843	45,701
Engines and turbines.....	1,273	1,255	1,003	1,105	1,106	845	16,884	16,622	16,278	16,616	16,423	16,299
Construction, mining, and material handling equipment.	2,122	1,978	2,035	2,081	1,935	1,948	6,583	6,442	6,410	6,590	6,461	6,480
Metalworking machinery.....	724	668	661	709	669	659	3,412	3,301	3,256	3,463	3,354	3,327
General industrial machinery.	739	911	934	756	981	1,012	6,557	6,713	6,750	6,570	6,746	6,736
Electrical machinery, total...	7,172	7,070	6,973	7,655	7,567	7,094	24,827	24,679	24,556	25,273	25,041	24,875
Electrical transmission and distribution equipment and industrial apparatus.....	1,420	1,369	1,327	1,409	1,420	1,306	5,890	5,876	5,825	5,922	5,928	5,903
Household appliances.....	974	950	871	987	1,016	943	315	325	328	333	362	372
Radio and TV.....	576	345	715	676	430	758	552	499	643	596	554	708
Communication equipment.....	1,871	1,985	1,605	2,141	2,116	1,681	11,580	11,533	11,455	11,927	11,649	11,430
Transportation equipment, total.....	16,087	13,145	12,417	18,522	14,190	11,080	56,400	54,114	54,575	57,434	54,443	54,435
Aircraft, missiles, and parts.....	4,281	2,682	2,183	5,216	3,200	2,491	38,231	36,839	36,928	39,364	37,067	36,719
Shipbuilding and military tank vehicles.....	1,534	335	243	1,495	348	95	9,217	8,333	8,570	9,057	8,257	8,490
All other durable goods industries.....	12,278	12,114	12,601	12,732	12,981	12,762	9,485	9,098	8,838	9,429	9,385	9,206
Nondurable goods industries, total.....	53,783	53,393	53,224	55,368	55,342	53,929	8,584	8,484	8,401	8,356	8,357	8,452
Industries with unfilled orders.....	12,055	11,985	11,922	12,640	12,378	11,958	8,584	8,484	8,401	8,356	8,357	8,452
Industries without unfilled orders.....	41,728	41,408	41,302	42,728	42,964	41,971	-	-	-	-	-	-

- Represents zero. P Preliminary. R Revised.

<sup>1</sup>Adjusted for trading-day and calendar-month variations.

<sup>2</sup>Motor vehicles and parts--During July, August, and September, motor-vehicle assembly plants are closed down to allow for retooling for the forthcoming model year. Year-to-year variations in both the timing and duration of the model changeover period are sufficiently great that the normal seasonal adjustment procedures do not adequately identify the seasonality during the period and may introduce substantial erratic movements. To compensate for this, the estimated seasonally adjusted quarterly average is used for the seasonally adjusted data in each of the three months. The unadjusted data, however, are not subject to any special adjustments. This series accounts for about two-thirds of the published motor vehicles and parts shipments and about 40 percent of the published transportation equipment shipments.



Table 2.--VALUE OF MANUFACTURERS' SHIPMENTS, INVENTORIES, AND ORDERS, FOR MARKET CATEGORIES AND SUPPLEMENTARY SERIES

(Millions of dollars)

Industry group	Seasonally adjusted			Without seasonal adjustment			Seasonally adjusted			Without seasonal adjustment		
	Oct. 1977 <sup>P</sup>	Sept. 1977 <sup>r</sup>	Aug. 1977	Oct. 1977 <sup>P</sup>	Sept. 1977 <sup>r</sup>	Aug. 1977	Oct. 1977 <sup>P</sup>	Sept. 1977 <sup>r</sup>	Aug. 1977	Oct. 1977 <sup>P</sup>	Sept. 1977 <sup>r</sup>	Aug. 1977
	Shipments						Total inventories					
All manufacturing industries, total..	112,745	111,921	111,376	117,861	116,853	109,894	176,829	176,164	175,104	175,395	174,161	173,730
Durable goods industries, total.....	59,065	58,608	58,087	62,491	61,415	55,768	112,075	111,787	111,452	110,889	110,740	110,656
Nondurable goods industries, total.....	53,680	53,313	53,289	55,370	55,438	54,126	64,754	64,377	63,652	64,506	63,421	63,074
Industry groups arranged by market categories:												
Home goods and apparel.....	9,127	8,994	8,898	10,058	9,870	9,645	14,652	14,614	14,708	14,382	14,453	14,774
Consumer staples.....	19,505	19,453	19,638	20,339	20,487	19,694	24,740	24,911	24,217	25,105	24,705	23,895
Equipment and defense products, except automotive.....	15,664	15,234	15,244	15,780	15,715	14,381	41,245	41,250	40,901	40,839	40,681	40,435
Automotive equipment.....	11,222	11,179	10,959	12,970	11,811	9,315	9,365	9,278	9,298	9,521	9,457	9,260
Construction materials, supplies, and intermediate products.....	10,201	10,149	9,985	10,715	10,808	10,574	14,836	14,677	14,462	14,567	14,562	14,507
Other materials and supplies and intermediate products.....	47,026	46,912	46,652	47,999	48,162	46,285	71,991	71,434	71,518	70,981	70,303	70,859
Supplementary series: <sup>2</sup>												
Household durable goods industries.....	3,820	3,754	3,688	4,207	4,171	3,913	7,524	7,517	7,559	7,392	7,384	7,539
Capital goods industries.....	17,827	17,511	17,436	17,966	18,134	16,441	45,713	45,897	45,641	45,489	45,358	45,173
Nondefense.....	15,319	14,943	14,935	15,349	15,405	14,020	39,117	39,043	38,715	38,876	38,573	38,331
Defense.....	2,508	2,568	2,501	2,617	2,729	2,421	6,596	6,854	6,926	6,613	6,785	6,842
	New orders						Unfilled orders					
All manufacturing industries, total..	116,303	112,441	111,494	121,412	117,055	111,036	186,722	183,166	182,646	187,528	183,974	183,774
Durable goods industries, total.....	62,520	59,048	58,270	66,044	61,713	57,107	178,138	174,682	174,245	179,172	175,617	175,322
Nondurable goods industries, total.....	53,783	53,393	53,224	55,368	55,342	53,929	8,584	8,484	8,401	8,356	8,357	8,452
Industry groups arranged by market categories:												
Home goods and apparel.....	9,443	9,025	9,161	10,155	9,842	9,940						
Consumer staples.....	19,487	19,432	19,660	20,350	20,474	19,729	4,212	3,916	3,903	4,278	4,171	4,211
Equipment and defense products, except automotive.....	17,850	15,242	14,332	18,687	15,982	14,086						
Automotive equipment.....	11,243	11,016	11,076	12,864	11,698	9,628	106,158	103,950	104,111	107,394	104,591	104,438
Construction materials, supplies, and intermediate products.....	10,437	9,883	10,129	10,734	10,809	10,707	18,305	18,068	18,335	18,446	18,427	18,426
Other materials and supplies and intermediate products.....	47,843	47,843	47,136	48,622	48,250	46,946	58,047	57,232	56,297	57,410	56,785	56,699
Supplementary series: <sup>2</sup>												
Household durable goods industries.....	4,094	3,773	3,931	4,293	4,136	4,222	3,408	3,135	3,115	3,488	3,403	3,438
Capital goods industries.....	20,695	17,819	16,676	21,742	18,709	16,323	115,804	112,935	112,630	117,124	113,345	112,772
Nondefense.....	16,374	16,189	14,678	16,384	16,467	14,359	84,222	83,167	81,923	84,600	83,562	82,502
Defense* <sup>3</sup> .....	4,321	1,630	1,998	5,358	2,242	1,964	31,582	29,768	30,707	32,524	29,783	30,270

\*During 1968 manufacturers in ordnance, communications, aircraft and aircraft parts, and shipbuilding industries began to provide aggregate figures on shipments, orders, and total inventories of work performed for the Department of Defense. The results of these reports are included in the defense series. <sup>P</sup>Preliminary. <sup>r</sup>Revised. <sup>1</sup>Shipments and new orders adjusted for trading-day and calendar-month variations; unfilled orders and inventories as of end of month. <sup>2</sup>The supplementary series are regroupings of the separate industry categories as follows:

Household durable goods industries - Household furniture; kitchen articles and pottery; cutlery, handtools, and hardware; household appliances; ophthalmic goods, watches, and clocks, watchcases; and miscellaneous personal goods.  
 Capital goods industries - The capital goods industries series is comparable to the previous Producers' Capital Goods and the Defense Products (old series) categories.  
 Nondefense industries - Machinery, except electrical (excluding farm machinery and equipment and machine shops), electrical machinery (excluding household appliances and electronic components), railroad equipment and the nondefense portions of shipbuilding and military tank vehicles, communication equipment, aircraft, aircraft parts and ordnance.  
 Defense products (new series) - Based on separate reports on defense work filed by large defense contractors in the following industries: ordnance, communications, complete aircraft, aircraft parts, and shipbuilding and military tank vehicles. The data are comparable to those published annually in the MA-175, Shipments of Defense-Oriented Industries, for the specified industries.

<sup>3</sup>Beginning in 1976, the fiscal year for the Federal Government was changed from a July 1-June 30 basis to an October 1-September 30 basis. This change in the Government's fiscal year probably affected the awarding of contracts and other financial arrangements. Although the impact of this change is not known, the use of previously established seasonal factors would have substantially distorted the current data since these seasonal factors reflect historical Government purchasing patterns. Therefore, beginning in July 1977, new composite seasonal factors were developed by combining the existing end of fiscal year information with data for the previous calendar quarter (i.e., one quarter preceding the end of the fiscal year). These composite factors were applied to the unfilled orders data for each of the separately tabulated defense industries. This adjustment also modified the new orders data. Similar adjustments could not be made for nondefense Government orders since such data are not compiled separately. This method of calculating the seasonal factors will be used until a sufficient amount of data are available to assess the impact of the change in the fiscal year on the seasonal pattern of the defense industries.

Table 3.--MANUFACTURERS' SHIPMENTS, INVENTORIES, AND ORDERS MONTH-TO-MONTH AND LONG TERM PERCENT CHANGES

(Based on seasonally adjusted data)

Item and industry group	Month-to-month			Average monthly rates of change				Average, 1972-1976	
	Sept.- Oct. 1977	Aug.- Sept. 1977	July- Aug. 1977	3 months			12 months Oct. 1976 Oct. 1977	Average rise	Average decline
				July- Oct. 1977	April- July 1977	Jan.- April 1977			
Shipments:									
All manufacturing industries.....	+0.7	+0.5	+2.0	+1.1	-0.1	+2.0	+1.3	+1.5	-1.1
Durable goods industries, total.....	+0.8	+0.9	+2.2	+1.3	+0.0	+2.2	+1.6	+1.8	-1.5
Nondurable goods industries, total.....	+0.7	+0.0	+1.7	+0.8	-0.3	+1.7	+0.9	+1.6	-1.1
Total inventories:									
All manufacturing industries.....	+0.4	+0.6	+0.3	+0.4	+0.7	+0.7	+0.5	+1.0	-0.4
New orders:									
All manufacturing industries.....	+3.4	+0.8	+2.7	+2.3	-0.9	+2.0	+1.4	+1.9	-1.7
Durable goods industries, total.....	+5.9	+1.3	+4.0	+3.7	-1.5	+2.2	+1.8	+3.1	-2.1
Nondurable goods industries, total.....	+0.7	+0.3	+1.2	+0.7	-0.2	+1.7	+0.9	+1.8	-1.1
Unfilled orders:									
Durable goods industries, total.....	+2.0	+0.3	+0.1	+0.8	+0.5	+0.5	+0.7	+1.6	-0.9

Table 4.--VALUE OF MANUFACTURERS' INVENTORIES, BY STAGE OF FABRICATION, BY INDUSTRY GROUP

(Millions of dollars)

Industry group	Seasonally adjusted			Without seasonal adjustment			Seasonally adjusted			Without seasonal adjustment		
	Oct. 1977 <sup>P</sup>	Sept. 1977 <sup>r</sup>	Aug. 1977	Oct. 1977 <sup>P</sup>	Sept. 1977 <sup>r</sup>	Aug. 1977	Oct. 1977 <sup>P</sup>	Sept. 1977 <sup>r</sup>	Aug. 1977	Oct. 1977 <sup>P</sup>	Sept. 1977 <sup>r</sup>	Aug. 1977
	Total						Materials and supplies					
All manufacturing industries, total..	176,829	176,164	175,104	175,395	174,161	173,730	64,126	64,303	63,891	64,036	63,691	63,647
Durable goods industries, total.....	112,075	111,787	111,452	110,889	110,740	110,656	37,475	37,538	37,312	37,542	37,540	37,371
Stone, clay, and glass products.....	4,399	4,348	4,314	4,222	4,241	4,286	1,566	1,556	1,547	1,545	1,568	1,554
Primary metals.....	17,830	17,640	17,759	17,449	17,357	17,486	8,245	8,131	8,274	8,223	8,231	8,238
Machinery (electrical and nonelectrical).	41,005	40,730	40,527	40,523	40,118	40,110	11,404	11,571	11,227	11,268	11,273	11,243
Transportation equipment.....	20,147	20,537	20,555	20,394	20,672	20,395	5,960	6,012	6,026	6,129	6,104	5,953
All other durable goods industries.....	28,694	28,532	28,297	28,301	28,352	28,379	10,300	10,268	10,238	10,377	10,364	10,383
Nondurable goods industries, total.....	64,754	64,377	63,652	64,506	63,421	63,074	26,651	26,765	26,579	26,494	26,151	26,276
Chemicals and allied products.....	14,226	13,949	13,746	13,941	13,620	13,543	5,548	5,643	5,442	5,529	5,510	5,439
Petroleum and coal products.....	5,830	5,846	5,686	5,969	5,941	5,780	2,004	1,963	2,018	1,989	1,919	2,017
Rubber and plastics products, n.e.c.....	4,169	4,185	4,137	4,095	4,087	4,092	1,486	1,514	1,509	1,461	1,479	1,499
All other nondurable goods industries....	40,529	40,397	40,083	40,501	39,773	39,659	17,613	17,645	17,610	17,515	17,243	17,321
	Work in process						Finished goods					
All manufacturing industries, total..	54,031	54,379	54,076	53,871	54,107	53,842	58,672	57,482	57,137	57,488	56,363	56,241
Durable goods industries, total.....	44,410	44,750	44,529	44,252	44,500	44,306	30,190	29,499	29,611	29,095	28,700	28,979
Stone, clay, and glass products.....	719	723	687	666	678	682	2,114	2,069	2,080	2,011	1,995	2,050
Primary metals.....	5,888	5,954	5,977	5,708	5,701	5,891	3,697	3,555	3,508	3,518	3,425	3,357
Machinery (electrical and nonelectrical).	17,637	17,594	17,412	17,627	17,506	17,318	11,964	11,565	11,888	11,628	11,339	11,549
Transportation equipment.....	11,339	11,738	11,826	11,456	11,813	11,742	2,848	2,787	2,703	2,809	2,755	2,700
All other durable goods industries.....	8,827	8,741	8,627	8,795	8,802	8,673	9,567	9,523	9,432	9,129	9,186	9,323
Nondurable goods industries, total.....	9,621	9,629	9,547	9,619	9,607	9,536	28,482	27,983	27,526	28,393	27,663	27,262
Chemicals and allied products.....	2,461	2,378	2,289	2,403	2,310	2,260	6,217	5,928	6,015	6,009	5,800	5,844
Petroleum and coal products.....	1,211	1,257	1,172	1,234	1,250	1,194	2,615	2,626	2,496	2,746	2,772	2,569
Rubber and plastics products, n.e.c.....	755	752	738	737	734	715	1,928	1,919	1,890	1,897	1,874	1,878
All other nondurable goods industries....	5,194	5,242	5,348	5,245	5,313	5,367	17,722	17,510	17,125	17,741	17,217	16,971

<sup>P</sup>Preliminary.<sup>r</sup>Revised.

Table 5.--RATIO OF MANUFACTURERS' INVENTORIES TO SHIPMENTS AND UNFILLED ORDERS TO SHIPMENTS, BY INDUSTRY GROUP

(Based on seasonally adjusted data)

Industry group	Inventories - shipments ratio				Unfilled orders - shipments ratio 'months' backlog			
	Oct. 1977 <sup>P</sup>	Sept. 1977 <sup>R</sup>	Aug. 1977	July 1977	Oct. 1977 <sup>P</sup>	Sept. 1977 <sup>R</sup>	Aug. 1977	July 1977
All manufacturing industries, total.....	1.57	1.57	1.57	1.60	3.19	3.15	3.17	3.23
Durable goods industries, total.....	1.90	1.91	1.92	1.95	3.83	3.78	3.81	3.88
Stone, clay, and glass products.....	1.54	1.47	1.40	1.49	0.99	0.92	0.90	0.92
Primary metals.....	2.17	2.09	2.14	2.18	2.16	2.12	2.13	2.12
Fabricated metals.....	1.82	1.87	1.88	1.96	3.38	3.41	3.49	3.65
Machinery, except electrical.....	2.43	2.44	2.40	2.49	4.80	4.82	4.75	4.88
Electrical machinery.....	2.20	2.23	2.22	2.21	3.53	3.55	3.55	3.55
Transportation equipment.....	1.46	1.51	1.56	1.50	8.22	8.07	8.56	8.27
Instruments and related products.....	2.10	2.13	2.09	2.12	1.70	1.71	1.65	1.68
Nondurable goods industries, total.....	1.21	1.21	1.19	1.21	0.72	0.71	0.70	0.73
Food and kindred products.....	1.05	1.07	1.02	1.04	(X)	(X)	(X)	(X)
Tobacco products.....	5.23	5.08	5.03	5.39	(X)	(X)	(X)	(X)
Textile mill products.....	1.50	1.51	1.54	1.60	(NA)	(NA)	(NA)	(NA)
Paper and allied products.....	1.26	1.27	1.24	1.27	(NA)	(NA)	(NA)	(NA)
Chemicals and allied products.....	1.53	1.46	1.49	1.49	(X)	(X)	(X)	(X)
Petroleum and coal products.....	0.70	0.72	0.70	0.70	(X)	(X)	(X)	(X)
Rubber and plastics products, n.e.c.....	1.35	1.33	1.35	1.37	(X)	(X)	(X)	(X)

NA Not available. P Preliminary. R Revised. (X) Not applicable.

<sup>1</sup>Excludes the following industries with no unfilled orders: Wood and lumber products; glass containers; metal cans, barrels and drums; motor vehicles assembly operations; foods and related products; tobacco; apparel and related products; chemicals; petroleum and coal products; and rubber and plastics products, n.e.c.



## APPENDIX

The following is a description of the survey and definitions used. These are provided to clarify the meaning of the items involved and do not represent any revisions from those definitions previously employed.

### DESCRIPTION OF SURVEY

The Manufacturers' Shipments, Inventories, and Orders survey provides monthly figures that are comparable to the annual totals published each year in the Annual Survey of Manufactures (ASM). The ASM is based on a sample of approximately 60,000 manufacturing establishments drawn from the 5-year census universe of about 310,000 establishments. In the ASM, each manufacturing establishment provides data on employment, payrolls, shipments, cost of materials, capital expenditures, and inventories as well as other selected items. The establishments do not provide information on unfilled orders or new orders. Since the ASM is establishment based, it provides data for each of the 425 manufacturing industries in the Standard Industrial Classification System (SIC) and area data for industry groups.

The monthly survey M3-1 does not provide information at the complete SIC industry detail because of the smaller size of the reporting panel and the fact that most companies cannot provide shipments, inventories, and orders data monthly for individual establishments.

The monthly reporting panel consists of approximately 5,000 reporting units and includes virtually all companies with 1,000 or more employees and a sample of the smaller ones. The reporting unit typically comprises the entire operations of a company although many of the larger diversified companies file separate divisional type reports for their operations in different industries.

Most of the reporting units include mixed industry activity even within the broad industry categories of the monthly survey. The survey methodology assumes that the month-to-month changes of the reporting units classified in each industry category represent effectively the month-to-month movements of the establishments in the SIC industries which make up the category. Thus, the monthly reports are used to update the ASM estimates by using a link relative of matched companies in each industry.

### EXPLANATION OF TERMS

*Value of Shipments*—Shipments in the monthly survey are equivalent to value of shipments as reported in the ASM which are received or receivable net selling values, f.o.b. plant, after discounts and allowances and excluding freight charges and excise taxes. Included in shipments are the value of all products sold, transferred to other plants of the same company, or shipped on consignment.

Shipments also include receipts of establishments in the industry for contract work performed for others, resales, receipts for miscellaneous activities such as the sale of scrap and refuse; value of installation and repair work performed by employees of the plant; and value of research and development performed at the plant. In the aircraft industry and ship-

building, the value of work done in a given year varies considerably from the value of shipments because of the long lead time between the input of the materials and labor and the shipments of the completed aircraft or ship. In the annual survey, therefore, the value of work done during the year is requested rather than the value of shipments.

The value of shipments figures developed from the ASM contain duplication at the all manufacturing and industry group levels since the products of some industries are used as materials by other industries within the industry group. With the exception of motor vehicles, it is not significant at the 4-digit SIC group level. Since the M3-1 industry categories typically are groupings of industries, this duplication is significant for the all manufacturing, durable goods and nondurable goods categories and the various market groups. The significance of the duplication within the specific M3-1 industry groups varies depending on the 4-digit industry composition of these groups. It is most pronounced in a few highly integrated industry areas such as primary metals and motor vehicles and parts.

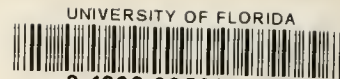
Since most monthly reports are for the entire company or major divisions rather than establishments, the companies are requested to report net sales, i.e., total company billings after discounts and allowances. Companies which file divisional reports are requested to treat transfers from one division of the company to another as if they were net sales to outside customers. Although this definition of shipments in the monthly reports differs from that used in the annual establishment reports, it is assumed that the month-to-month changes in company sales in the industry are representative of the month-to-month shipments of the establishments in the industry.

*Inventories*—End-of-month inventories in the monthly survey are identical in definition to the end-of-year inventories in the ASM. In the ASM, respondents are asked to report inventories of individual establishments at approximate current cost if feasible; otherwise, "at book values." Since different methods of inventory valuation are used (LIFO, FIFO, etc.), the definition of the aggregate inventories for establishments in an industry is not precise. The figures on the change in inventories from one period to the next are of greater significance than the actual aggregates.

Inventories are reported by stage of fabrication: (a) finished goods; (b) work in process; and (c) materials, supplies, fuel, and other inventories. In using inventories by stage of fabrication at the all manufacturing and 2-digit industry levels as well as for the durable and nondurable goods sectors, it should be noted that a finished product of one industry may be a raw material for another industry at the next stage of fabrication. Insofar as the durable and nondurable goods sectors and also the 2-digit industry groups contain industries with successive stages of processing, the same type of commodity may be included under different inventory categories in the aggregate statistics.

*New Orders Received and Unfilled Orders*—Orders as reported in the monthly survey are net of cancellations during the month. They include orders received during the period and also filled during the period as well as those orders received for future delivery. They also include the net sales value of contract

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change documents which increase or decrease the sales value of the unfilled orders to which they relate. Orders include only those supported by binding legal documents such as signed contracts, or letter contracts. In case of letter contracts the full amount of the sales value is included if the parties are in substantial agreement on the amount; otherwise, only the funds specifically authorized to be expended are included. The respondent is instructed to deduct the sales value of partial or complete cancellation of existing orders.

Unfilled orders include orders as defined above that have not yet passed through the sales account. Generally, unfilled orders at the end of the reporting period are equal to unfilled orders at

the beginning of the period plus net new orders received less net sales.

While both new orders and unfilled orders are used in reviewing individual company reports for consistency, only unfilled orders are estimated directly in the tabulated totals. New orders are derived from the shipments plus net change in unfilled orders for each industry category. This procedure is followed for seasonally adjusted data as well as for the unadjusted data. Shipments and unfilled orders are seasonally adjusted independently. Seasonally adjusted new orders are derived from seasonally adjusted shipments and seasonally adjusted unfilled orders.

